

AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 1, line 8, as follows:

~~BACKGROUND OF THE INVENTION.~~

Please amend the paragraph beginning at page 1, line 10, as follows:

The exemplary embodiments of the present invention relates to an oil deterioration detection apparatus.

Please amend the paragraph beginning at page 2, line 9, as follows:

However, in the oil deterioration detection apparatus, even if the oil deterioration-detecting sensor itself malfunctions, it does not detect a malfunction condition of the sensor itself. This is because that the output signal from the oil deterioration-detecting sensor varies based on the deterioration of the oil, so that the deterioration detection apparatus merely evaluates that the oil is deteriorated when the output signal varies. In addition, the oil deterioration detection apparatus does not have a detection element that detects the malfunction condition of the sensor. Therefore, it is difficult for the oil deterioration detection apparatus to distinguish the deterioration of the oil and the malfunction of the sensor only from the output signal. As a result, the oil deterioration detection apparatus may misunderstand the condition of the oil if the sensor malfunctions.

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Please amend the paragraph beginning at page 3, line 18, as follows:

~~SUMMARY OF THE INVENTION.~~

Please amend the paragraph beginning at page 3, line 19, as follows:

~~An object~~ A feature of an exemplary embodiment of the present invention is to provide an oil deterioration detection apparatus that can detect a malfunction of an oil deterioration-detecting sensor to prevent a detection of oil deterioration from having an error by mistake.

Please amend the paragraph beginning at page 3, line 24, as follows:

~~Another object~~ feature of an exemplary embodiment of the present invention is to provide the oil deterioration detection apparatus that is possible to be protected from being damaged.

Please amend the paragraph beginning at page 5, line 7, as follows:

The above and other objects, features and advantages of exemplary embodiments of the present invention will become more apparent from the following detailed description made with reference to the accompanying drawings.
In the drawings:

Please amend the paragraph beginning at page 6, line 1, as follows:

DETAILED DESCRIPTION OF NON-LIMITING EXEMPLARY
~~PREFERRED~~ EMBODIMENTS.

Please amend the paragraph beginning at page 6, line 2, as follows:

The ~~preferred~~ exemplary embodiments of the present invention will be explained with reference to the accompanying drawings.

Please amend the paragraph beginning at page 6, line 4, as follows:

FIG. 1 shows an electric circuit of an oil deterioration detector 1 according to the present invention. The oil deterioration detector 1 is used for detecting a deterioration of oil. The oil deterioration detector 1 is disposed in an oil pan 3 of a vehicle as shown in FIG. 5A. The oil deterioration detector 1 detects and evaluates a deterioration degree of oil. The oil is used as at least one of a hydraulic control oil and motor oil.

Please amend the paragraph beginning at page 11, line 6, as follows:

As shown in FIGS. 5A-5B, the oil deterioration-detecting sensor 10 has a first electrode 20 and a second electrode 30. The first electrode 20 and the second electrode 30 are immersed in the oil within the oil pan 3 of the vehicle. The first electrode 20 and the second electrode 30 are mounted on a support member 11 by adhesive. The support member 11 is made of an isolative resin. The support

member 11 has terminals 12, 12, which are electrically connected to the first electrode 20 and the second electrode 30, respectively. A cover 15 is combined with the support member 11 to cover the first electrode 20 and the second electrode 30. The cover 15 has communicating holes 15a through which the oil flows inside and outside the cover 15.

Please amend the paragraph beginning at page 12, line 22, as follows:

Each of the first electrode 20 and the second electrode 30 has approximately cylindrical shape as shown in FIGS. 3 to 5B. The second electrode 30 is coaxially disposed outside the first electrode 20. The first electrode 20 and the second electrode 30 are immersed in the oil within the oil pan 3 of the vehicle.

Please amend the paragraph beginning at page 13, line 1, as follows:

As shown in FIGS. 3, 4, the first electrode 20 has first fins 21. The first fins 21 are protruded outwardly in a radial direction from a surface of a cylindrical body of the first electrode 20 toward the second electrode 30. The first fins 21 are extended in an axial direction of the first electrode 20. The first fins 21 are one of protruding portions. First slits 25 are formed between adjacent first fins 21, 21, which are adjacent in a circumferential direction of the first electrode 20. The oil in the oil pan 3 flows inside and outside the first electrode 20 through the first slits 25.

Please amend the paragraph beginning at page 13, line 11, as follows:

The second electrode 30 has second fins 31. The second fins 31 are protruded inwardly in the radial direction from a surface of a cylindrical body of the second electrode 30 toward the first electrode 20. The second fins 31 are extended in an axial direction of the second electrode 30. The second fins 31 are other protruding portions. Second slits 35 are formed between adjacent second fins 31, 31, which are adjacent in a circumferential direction of the second electrode 30. The oil in the oil pan 3 flows inside and outside the second electrode 30 through the second slits 35. As a result, the oil flows through the first electrode 20 and the second electrode 30 via the first slits 25 and the second slits 35. The oil does not stay around the first electrode 20 and the second electrode 30. Therefore, the deterioration degree of the whole oil can be accurately detected.

Please amend the paragraph beginning at page 16, line 18, as follows:

FIG. 6 is a schematic circuit diagram showing a difference between a related art and the oil deterioration detector 1 of an exemplary embodiment of the present invention. The related art has electrical components shown in FIG. 6 other than an electrical component 80 (malfunction detecting circuit) shown by a chain line. The oil deterioration detector 1 of the present embodiment has whole electrical components shown in FIG. 6 including the electrical component 80 (malfunction detecting circuit) shown by the chain line. In the oil deterioration

detector 1 of the present embodiment, the malfunction detecting circuit 80 shown by the chain line is connected in parallel with the oil deterioration-detecting sensor 10 and the measurement circuit 50, if required, by the first switch 81.

Please delete the paragraph beginning at page 17, line 5 in its entirety.

Please amend the paragraph beginning at page 17, line 6, as follows:

At first, a radical principle of the related art will be explained.

Please delete the paragraph beginning at page 18, line 20 in its entirety.

Please amend the paragraph beginning at page 21, line 4, as follows:

The oil deterioration detector 1 operates during an operation time period. The operation time period is an entire duration in which an ignition of the vehicle is turned on, or a part of the entire duration. The operation time period has a deterioration-detecting period and a malfunction-detecting period. The deterioration-detecting period is a time duration in which the oil deterioration detector 1 evaluates the oil condition. That is, the deterioration detecting process is carried out in the ~~deterioration~~malfunction-detecting period. The malfunction-detecting period is another time duration in which the oil deterioration detector 1 is permitted to check whether the oil deterioration-detecting sensor 10

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malfunctions or not. That is, the malfunction detecting process is carried out in the operation time period. The deterioration-detecting period is a time period other than the deterioration-detecting period. Accordingly, both functions of the deterioration detection and the malfunction detection can be carried out by separate time periods.